

Translation

11 JUL 2005

PATENT COOPERATION TREATY

10/543708
PCT/DE2003/002672

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002P17212WO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE2003/002672	International filing date (day/month/year) 08 August 2003 (08.08.2003)	Priority date (day/month/year) 24 January 2003 (24.01.2003)
International Patent Classification (IPC) or national classification and IPC H01Q 9/04		
Applicant SIEMENS AKTIENGESELLSCHAFT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 22 March 2004 (22.03.2004)	Date of completion of this report 22 April 2005 (22.04.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE2003/002672

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages _____ 1-8 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 2-11 _____, as originally filed
 pages _____ 1 _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages _____ 1/4-4/4 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/DE 03/02672

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-11	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-11	NO
Industrial applicability (IA)	Claims	1-11	YES
	Claims		NO

2. Citations and explanations

1. Introductory observations

1.1 The embodiment described on page 6 (lines 20-26) and shown in figure 2 does not come under the scope of the present claims, since the multiband antenna arrangement according to figure 2 encompasses only one parasitic element. This contradiction between the claims and the description causes doubt as to the subject matter for which protection is sought, and therefore the claims lack clarity (PCT Article 6).

1.2 The wording "preferably" is not admissible for establishing indubitable rights in claim 11. It is not possible to determine whether the portions of the claim preceded by the term are an explanation, a feature for which protection is sought, a preferred field of application, or an inserted subclaim. In the definition of the class, "preferably" refers to a preferred field of application for the subject matter of the application that is of no consequence for the examination or assessment of the claim and should be included in the description.

2. This report makes reference to the following documents:
- D1: US 2002/163470 A1 (ONAKA KENGO ET AL) 7 November 2002 (2002-11-07)
- D2: EP-A-1 067 627 (BOSCH GMBH ROBERT) 10 January 2001 (2001-01-10)
- D3: US 2002/019247 A1 (EGOROV IGOR) 14 February 2002 (2002-02-14)
- D4: WO 01/33665 A1 (RANGESTAR WIRELESS) 10 May 2001 (2001-05-10).
3. Irrespective of the above-mentioned lack of clarity, the subject matter of claim 1 does not involve an inventive step within the meaning of PCT Article 33(3).
- 3.1 D1 is regarded as the prior art closest to the subject matter of claim 1. It discloses (the reference signs in parentheses refer to D1) a multiband antenna arrangement for mobile radio devices with:
- a planar patch antenna (14) having at least two resonances (16,17) and a high frequency interface (15,23), and
 - at least two parasitic elements (18b,19b) that are arranged marginally with respect to the planar patch antenna (14), each of which is designed without a high frequency interface,
- the structures of the planar patch antenna (14) being embodied as flat conductive structures (cf. figure 1).
- 3.2 The subject matter of claim 1 differs from this known multiband antenna arrangement in that
- a) the patch antenna has a connection to the

ground, and

- b) the parasitic elements are embodied as linear conductive structures.

3.3 It is generally known to a person skilled in the art, however, that the length of a patch antenna can be decreased by means of a short circuit; cf. a), see, for example D2 and/or D3. Therefore, it would be obvious for a person skilled in the art to apply this feature to a multiband antenna arrangement according to D1. The feature that the parasitic elements can be embodied as linear conductive structures, cf. b), is also generally known to a person skilled in the art; cf. D3 and/or D4.

Therefore, the subject matter of independent claim 1 does not involve an inventive step (PCT Article 33(3)).

4. Dependent claims 2-11 contain no features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step, since
- these features are mentioned in D1 (claims 2, 5 and 10), and
 - these features are regarded as obvious (claims 3, 4, 6-9 and 11); see, for example, D2-D4.
5. Contrary to the requirements of PCT Rule 5.1(a)(ii), the description neither cites documents D1-D4 nor indicates the relevant prior art disclosed therein.